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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,183	07/19/2001	Douglas Lawton Youngblood	SE-1698-TL (50110)	9094

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EXAMINER

BRINEY III, WALTER F

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,183

Applicant(s)

YOUNGBLOOD, DOUGLAS
LAWTON

Examiner

Walter F. Briney III

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-46, 50-54, 58-62, 66 and 67 is/are rejected.
- 7) ☒ Claim(s) 47-49, 55-57 and 63-65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

52-54 and 60-62

1. **Claims 44-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (US Patent 5,854,839).** *✓*

Claim 44 is limited to “a subscriber line interface circuit (SLIC).” Each of the four main elements of the SLIC are clearly disclosed by Chen in figure 1. Amplifier AT corresponds to the “tip amplifier,” amplifier AR corresponds to the “ring amplifier,” fuse FT corresponds to the “tip amplifier output current limit circuit” and fuse FR corresponds to the “ring amplifier output current limit circuit. Amplifier AT clearly couples to “a tip portion of a subscriber loop,” indicated as TIP in figure 1. Amplifier AR clearly couples to “a ring portion of a subscriber loop,” indicated as RNG in figure 1. The fuses FT and FR are notoriously well known devices. Fuses inherently monitor currents and limit the monitored current for values above a threshold that is programmed at the time of manufacture. As fuse FT is connected only to the TIP connection point, it can only monitor and control “tip amplifier output current,” and must do so exclusive and irrespective of said ring amplifier output current in accordance with a “programmable tip amplifier output current limit.” Likewise, as fuse FR is connected only to the RNG connection point, it can only monitor and control “ring amplifier output current,” and must

do so exclusive and irrespective of said tip amplifier output current in accordance with a “programmable ring amplifier output current limit.” Therefore, Chen anticipates all limitations of the claim.

Claim 45 is limited in part to “the SLIC according to claim 44,” as covered by Chen. Fuses as disclosed by Chen simply consist of a wire element that burns out in the presence of an overcurrent, and therefore, are inherently non-polarized devices; they will react in an overcurrent condition regardless of the direction of current flow. It follows that each fuse, FT and FR, will monitor at least one of “a source current” and “a sink current” of their respective subscriber loop connection, i.e. tip and ring. The single overcurrent threshold inherent in each fuse governs both possible directions of current flow, such that each fuse uses “at least one programmable tip/ring amplifier output current limit.” Therefore, Chen anticipates all limitations of the claim.

Claim 46 is limited in part to “the SLIC according to claim 44,” as covered by Chen. Apropos the rejection of claim 45, it was shown that because fuses are non-polarized, source and sink overcurrents are both capable of tripping fuses FT and FR as disclosed by Chen. Therefore, each fuse is operative to monitor either tip/ring amplifier source and sink currents and to limit said tip/ring amplifier source and sink currents in accordance with at least one programmable tip/ring amplifier output current limit. Therefore, Chen anticipates all limitations of the claim.

Claims 52-54 are limited to “a subscriber line interface circuit (SLIC)” comprising essentially the same elements as claims 44-46, respectively. In addition, the SLIC of claims 52-54 include “a direct current limit circuit” that is disclosed by Chen in figure 1.

The DC limit circuit of Chen provides regulated current by way of node VREG to the ring connection, and thus, is connected to the "ring amplifier output." Further, the circuit includes path from the tip connection to ground by way of resistor RT, and thus, is connected to the "tip amplifier output." Chen discloses in column 4, lines 23-51, that DC current is limited to a max of 23 mA. Therefore, Chen anticipates all limitations of the claims.

Claims 60-62 are limited to "a method for limiting a tip amplifier output current applied by a tip amplifier of a subscriber line interface circuit to a tip portion of a subscriber loop, and for limiting a ring amplifier output current applied by a ring amplifier of said SLIC to a ring portion of said subscriber loop" that performs the functions inherently executed by the tip and ring amplifier output current limit circuits of the SLICs recited in claims 44-46, respectively. Therefore, Chen anticipates all limitations of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Pasetti et al. (US Patent 5,596,637).**

Claim 50 is limited in part to “the SLIC according to claim 44,” as covered by Chen. Chen discloses a direct current limit circuit in figure 1. It provides regulated current by way of node VREG to the ring connection, and thus, is connected to the “ring amplifier output.” Further, the circuit includes path from the tip connection to ground by way of resistor RT, and thus, is connected to the “tip amplifier output.” Chen discloses in column 4, lines 23-51, that DC current is limited to a max of 23 mA. It makes sense that the fuses programmed with thresholds above this max of 23mA would be chosen it is not inherent. Therefore, Chen anticipates all limitations of the claim with the exception where the “programmable tip/ring amplifier transient output current limit” is higher than said “prescribed DC current limit.” However, this deficiency is overcome by an obvious modification.

In particular, because Chen does not disclose typical fuse values, one of ordinary skill in the art would be required to choose an appropriate fuse. Pasetti teaches providing current limits in the range of 20 to 100 mA within telephone circuitry, such as a SLIC, with 100 mA reserved for protection of overcurrents. See column 3, lines 22-25 and table 1. Pasetti also discloses limiting currents to about 30 mA.

It would have been obvious to provide fuses that limit overcurrents to either 30 or 100 mA as taught by Pasetti since Pasetti explicitly states that telecommunication circuits typically require such protection and because Chen fails to otherwise disclose the current limits of fuses FT and FR.

Claim 51 is limited in part to “the SLIC according to claim 50,” as covered by Chen in view of Pasetti. Using 30 mA fuses and a 23mA DC limit results in “a

programmable tip/ring amplifier transient output current limit on the order of but less than fifty percent higher than said prescribed DC current limit.” Therefore, Chen in view of Pasetti makes obvious all limitations of the claim.

Claims 58 and 59 are limited in part to “the SLIC according to claim 52” and further comprise essentially the same elements as the SLICs of claims 50 and 51, respectively. Therefore, Chen in view of Pasetti makes obvious all limitations of the claims.

Claims 66 and 67 are limited in part to “the method according to claim 60” and further perform essentially the same steps executed by the tip and ring amplifier output current limit circuits of the SLICs recited in claims 50 and 51, respectively. Therefore, Chen in view of Pasetti makes obvious all limitations of the claims.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

3. ^{55-57 and 63-65} **Claims 47-49** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 47 is limited in part to “the SLIC according to claim 44,” as covered by Chen. While Chen discloses fuses that monitor both source and sink currents on the tip and ring connections, fuse inherently do not individually monitor source and sink currents. Thus, claim 47 is allowable over the cited prior art.

Claims 48 and 49 are limited in part to "the SLIC according to claim 47," and thus, are allowable over the cited prior art for at least the same reasons.

Claims 55-57 are limited in part to "the SLIC according to claim 52" and comprise essentially the same elements as claims 47-49. Thus, claims 55-57 are allowable over the cited prior art.

Claims 63-65 are limited in part to "the method according to claim 60" and further perform essentially the same steps executed by the tip and ring amplifier output current limit circuits of the SLICs recited in claims 47-49, respectively. Thus, claims 63-65 are allowable over the cited prior art.

Response to Arguments

Applicant's arguments with respect to claims 44-67 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WFB


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